## horizontal line

Project 4 Proposal -  
Data Detectives

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# Overview

Team AEJJ is seeking to discover relationships between U.S. Gross Domestic Product (GDP) and overall economic health. Can machine learning predict a recession, with better than 75% accuracy, by analyzing historical GDP data?

# Background

The generally accepted definition of a recession in the U.S., [according to Forbes](https://www.forbes.com/advisor/investing/what-is-a-recession/), is when GDP shrinks in two consecutive quarters. The National Bureau of Economic Research traditionally follows a more vague definition:

*“A recession involves a significant decline in economic activity that is spread across the economy and lasts more than a few months.”*

[Business Cycle Dating](https://www.nber.org/research/business-cycle-dating#:~:text=The%20NBER's%20definition%20emphasizes%20that,and%20duration%E2%80%94as%20somewhat%20interchangeable.)

While GDP results typically define recession conditions, we want to know if ML can detect trends in quarterly results and predict a recession ahead of time.

# Data Source

## GDP data (1929-2023)

Source: [Bureau of Economic Analysis (U.S. Dept. of Commerce)](https://apps.bea.gov/national/Release/XLS/Survey/Section1All_xls.xlsx)